Sintered media performance datasheets

Download construction-specific data for five-layer sintered mesh, 0.5 mm fiber felt and six-layer reinforced laminates. Air permeability keeps its own fluid, differential pressure and unit.

Four data groups and a composite-structure guide

The package contains 11 five-layer grade/flow pairs, nine fiber-felt performance rows and five six-layer sheet formats. The composite guide separates square-mesh and perforated-plate backing from standard five-layer construction. S04 adds three sheet formats for the 316L perforated-plate composite. Mesh layers are bonded to the plate backing; specify plate thickness and the filtering-layer sequence for the finished component.

XLSX: separate construction sheets with filters. CSV: one field per record, linked by series and row ID. PDF: readable complete tables and definitions.

Field definitions and units

Nominal grade is in µm. Air permeability is volume flow per area in L/(min·dm²), with the pressure difference in Pa. Porosity is %. Dirt-holding capacity is mg/cm². Bubble pressure is a separate integrity-related quantity; wetting fluid and procedure belong in the acceptance specification.

CSV uses UTF-8 with BOM, a comma delimiter and a decimal point. XLSX stores individual dimensions and measured values as numbers. Paired designations and ranges remain text. Empty cells mean no value is assigned for that construction.

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

Construction and test conditions

S01 is a 1.7 mm 304/316L five-layer series using air at 1000 Pa. S02 is a 0.5 mm stainless fiber-felt series using air at 200 Pa. S03 describes a six-layer laminate with an additional square-mesh support. Its 1–300 µm range and sheet dimensions define that reinforced construction. S04 adds three sheet formats for the 316L perforated-plate composite. Mesh layers are bonded to the plate backing; specify plate thickness and the filtering-layer sequence for the finished component.

How to use the tables

1. Select laminate or felt by solids and support needs. 2. Compare air permeability at the same medium, differential pressure and specimen construction; select filtration grade by its grade and acceptance definition. 3. Define active area, fluid viscosity, service temperature and pressure difference. 4. Specify backing, seams, seals and cleaning, and measure clean-flow recovery at consistent conditions.

At 10 µm, the five-layer series lists 310 L/(min·dm²) at 1000 Pa, while the felt lists 100 L/(min·dm²) at 200 Pa. Keep each flow with its stated pressure difference. For unit conversion only, 1 L/(min·cm²) equals 100 L/(min·dm²).

Questions when specifying a filter

Can I compare every listed air-flow number directly?

Compare values at the same fluid, pressure difference, area unit and medium construction. Use the paired conditions when requesting the required process flow.

How do reinforced and composite media change the specification?

An extra support mesh, square-mesh layer arrangement or perforated backing changes the layer sequence and finished thickness. Define those layers and the supported active area on the part drawing.

S01 Five-layer stainless laminate

Row ID	Nominal grade (μm)	Thickness (mm)	Air permeability (L/(min·dm²))	Air test differential (Pa)
S01-001	1	1.7	180	1000
S01-002	2	1.7	240	1000
S01-003	5	1.7	260	1000
S01-004	10	1.7	310	1000
S01-005	15	1.7	350	1000
S01-006	20	1.7	450	1000
S01-007	25	1.7	620	1000
S01-008	30	1.7	690	1000
S01-009	50	1.7	850	1000
S01-010	70	1.7	900	1000
S01-011	100	1.7	1080	1000

304 / 316L; 1.7 mm; Air test differential: 1000 Pa.

S02 Stainless fiber felt

Row ID	Nominal grade (μm)	Bubble pressure (Pa)	Air permeability (L/(min·dm²))	Porosity (%)	Dirt-holding capacity (mg/cm²)	Thickness (mm)
S02-001	5	6500	35	75	5	0.5
S02-002	7	5000	55	75	6	0.5
S02-003	10	3700	100	79	7	0.5
S02-004	15	2450	140	78	9	0.5
S02-005	20	1900	260	77	15	0.5
S02-006	25	1500	320	76	21	0.5
S02-007	30	1200	480	75	26	0.5
S02-008	40	950	650	77	35	0.5
S02-009	60	650	1100	77	38	0.5

304 / 316L; 0.5 mm; Air test differential: 200 Pa.

S03 Six-layer reinforced laminate

Row ID	Grade range minimum (µm)	Grade range maximum (µm)	Length (mm)	Width (mm)	Layers
S03-001	1	300	1000	500	6
S03-002	1	300	1000	600	6
S03-003	1	300	1000	1000	6
S03-004	1	300	1200	1000	6
S03-005	1	300	1200	1200	6

Keep the series code and row ID with every selected specification. Values sharing a row describe the same construction; a material branch and a geometry series retain their own definitions.

S04 Perforated-plate composite

Row ID	Length (mm)	Width (mm)
S04-001	500	1000
S04-002	600	1200
S04-003	1000	1200

316L. An extra support mesh, square-mesh layer arrangement or perforated backing changes the layer sequence and finished thickness. Define those layers and the supported active area on the part drawing.